



Kasra Digital Instruments

KDI-ISA-DAQ-40K Multi-function data acquisition PC card

Features:

- IBM PC/XT/AT compatible card
- 8-channel differential analog inputs with 12-bit resolution
- 1 channel 12-bit analog output
- 4 SPDT 7.5A relays
- 4 TTL digital outputs and 7 digital inputs
- Software programmable gains of 1,2,10,100 and 1000 for analog inputs
- Maximum throughput 40KHz
- Onboard 24MHz microcontroller and 64Kbyte RAM for precision and system independent data acquisition
- Fully compatible with National Instruments LabVIEW and Mathworks MATLAB
- High level drivers eliminate need for low level time consuming programming

General Description:

The KDI-ISA-DAQ-40K is a low cost A/D, D/A, relay, DIO card that gives users of IBM PC/AT compatibles, including laptops, an inexpensive solution to data acquisition applications such as temperature, humidity, pressure, flow, biomedical signals and level measurements. The KDI-ISA-DAQ-40K has a 12-bit A/D converter with 8 differential analog input channels and a throughput of 40 KHz to onboard memory. With programmable gains of 1,2,10,100 and 1000, users can define a particular gain value for input corresponding to the signal level. This feature will give optimum resolution to measurement, and minimize the requirement of front-end signal conditioning.

The onboard microcontroller provides more accurate and system independent data acquisition and assures users that under any circumstances of PC operation, no data are lost in a specific amount of time.

All of the card functions are accessible in a very high level manner through National Instruments LabVIEW and Mathworks MATLAB, using KDI 32-bit DLL drivers, which are supplied in the package.

Specifications:

Analog Input Subsystem

- **Number of Inputs:** 8 Differential
- **Resolution:** 12-bit
- **Maximum Throughput:** 40 KHz
- **A/D Conversion Time:** 10 μ Sec max
- **Input Ranges:**
 $\pm 5V$, $\pm 2.5V$, $\pm 0.5V$, $\pm 50mV$, $\pm 5mV$,
all software selectable
- **Input Impedance:** $>1000 M\Omega$
- **Nonlinearity:** $\pm 1LSB$
- **CMRR:** 100dB @ gain 10
- **Onboard Memory:** 64 Kbyte SRAM

Analog Output

- **Number of channels:** 1
- **Output Range:** $\pm 10\text{V}$

Digital I/O Subsystem

- **Digital Input Lines:** 7
- **Digital Output Lines:** 4
- **Input/Output Level:** TTL compatible

Relay Output

- **Number of Relays:** 4
- **Type of Relays:** SPDT
- **Maximum Current/Voltage:** 7.5A/240VAC
15A/120VAC